

Assessment of shift work problem faced by female nurses

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ABSTRACT

Shift work is a major feature of work life across a broad range of industries. Shift work and work-related stress are important topics in the healthcare sector due to their possible negative impact on the workers' health and safety, in terms of health and well being. So, the study was conducted in Maharana Bhopal Govt. Hospital at Udaipur. The sample consisted of 60 female nurses between the age group of 30 -60 years, working in flexible rotating shifts. A standardized tool *i.e.* the Standard Shiftwork Index (SSI) was used to elicit required data from each respondent. Changes in work schedules were particularly problematic for those with less seniority. The amount of sleep and disturbed sleep has a great impact on the shift workers the highest being impact on general feeling of tiredness was amongst old group respondents with a score of 134. While the young group respondents were having its highest impact on normal amount of sleep (98). The overall scores health and well being problems and their impact was very high in young group as compared to the old group with a total score of 1079 and 807, respectively. The respondents expressed that shift work interfered more with family related problems because of the lack of synchrony between their hours on job and their families daily routine. The most serious impact was for those who worked evenings and night shifts. From old group 32 per cent, 46 per cent, and 23 per cent of respondents said that they used their disengagement strategies 'a little', 'somewhat', 'quite' often, respectively. Both the groups coped with the domestic situations by solving problems, re organization of work, letting out evaluation and talking about their feelings. Coping strategies related to social life, domestic life and sleep gave us an understanding that the female nurses solve the problems and reorganize them properly instead of avoiding situation or criticizing themselves. This point needs special attention that is age is a factor of adopting disengagement mode of coping with work situations in female nurses.

KEY WORDS : Shift work, Fatigue, Coping strategies

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INTRODUCTION

Women are the backbone of any economy primarily shaping future of country. Ever since India opened its doors to liberalization in the early 1990s, there has been a steady transformation in India's economy. Self-reliance helped in building great institutions of learning and taking strides in various fields of life in keeping pace with the rapidly changing world.

Women have become equal participants in many respects at all levels of society. The future would see more women venturing into areas traditionally dominated by men. This will lead to the income generation and a greater sense of fulfilment among women. In almost all the countries, government is providing special provision for women's development and efforts are being made to bring out maximum of their talent. In India, as during Veda and Upanishad periods, women were being accorded with respect and were facilitated in all spheres of life. The shift work no doubt caused many physical and

psychological demands on an individual.

In recent years, more emphasis has been laid on the psychosocial needs of the workers, so more and more workers have the liberty to choose the hours and times when they wish to work. As a result of the foregoing factors, we now have several work scheduling alternatives: the eight-hour daylight schedule, permanent off- hour shifts, rotating shifts that change from daylight hours to evening to night periodically and schedules arranged according to the choice of the worker. Although alternative work schedules are generally well received by workers, some epidemiologists, sociologists and health personnel have raised questions as to whether these work schedules cause physiological or psychological changes in the workers.

Shift work is common in many sectors. Essential and emergency services such as medical, transport, fire and rescue, law enforcement services and some public services have to be provided round-the-clock. In recent years, some service establishments such as convenience stores and fast food shops also provide 24-hour service and employees

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concerned, therefore, are required to work in shifts. Suitably arranged shift work is important to employees, employers and the self-employed.

Shift work is a reality for about 25 per cent of North America's working population. Interest in the effect of shift work on people has developed because many experts have blamed rotating shifts for the human errors connected to a number of accidents and catastrophes related to the disturbance of circadian rhythms which results in an increased risk of accidents and injury (Coffey *et al.*, 1998). The International Council of Nursing (ICN) recognizes that many health care providers' services are accessible on twenty-four hour basis that makes shift work a necessity. At the same time, International Council of Nursing is very concerned that shift work may have a negative impact on an individual's health, ability to function, thus affecting the services provided. According to the International Labour Organization, working in shifts is "a method of organization of working time in which workers succeed one another at the workplace so that the establishment can operate longer than the hours of work of individual workers at different daily and night hours". The shift system can be generally classified into a fixed shift system and a rotating one.

Shift work and work-related stress are important topics in the healthcare sector due to their possible negative impact on the workers' health and safety. This includes cardiovascular diseases, gastrointestinal complaints, sleep troubles, mental health problems, fatigue, job dissatisfaction, accidents and injuries at work, reduced vigilance and job performance, absenteeism and turnover (Muecke, 2005; Poissonnet and Ve'ron, 2000; McVicar, 2003).

According to Taylor *et al.* (1997), the movement from a linear, chronobiological conceptualization towards more conceptually broad, dynamic, multidirectional, psychological view of the relationship between shift work and health were mainly supported by the observations that variations in adaptation to shift work cannot be fully explained by factors such as the shift system, biological disturbances and stable individual differences.

The main impact on human health is the lack of sleep. Sleep is an active process and without it, we would not survive. One can neither sleep long enough during daytime nor as soundly as we normally do at night due to the constant noise of the waking world around us. So, the shift worker is less refreshed and develops chronic fatigue that makes him irritable and listless during work hours. Sleep is physically, mentally and emotionally essential to the healthy function of a human being.

There is a growing concern about the ability of individuals to maintain adequate levels of performance over

long work shifts, particularly when those shifts span night time hours. Research results are mixed on this issue. Most of the nursing studies rely heavily on the general scientific literature in the field of shift work and sleep disorders (Almard, 2008).

Problems faced by shift workers:

Shift work generally is defined as working hours that are scheduled outside of daylight. Shift work disrupts the synchronous relationships between the body's internal clock and the environment (Anders, 2003). The problem such as sleep disturbances, increased accidents and injuries, and social isolation. Physiological effects include changes in rhythms of core temperature, various hormonal levels, immune functioning and activity rest cycles. Adaptation to shift work is promoted by entrainment of the internally regulated functions and adjustment of activity rest and social patterns.

Shift work and women's health:

Studies have found that risk of breast cancer was 60 per cent higher in women who worked in night-shifts compared to those who did not. The improper production of the melatonin hormone is thought to be associated with the increased risk of breast cancer (Davis and Stevens, 2001).

Irregular menstrual cycle and pains were reported from women in a number of industries who worked in night shifts. Higher risk of miscarriage and lower rates of pregnancies and deliveries were also mentioned. The objectives are as to explore problems related to shift work faced by female nurses and to study the impact of shift work on female nurses in terms of health and well being.

METHODS

Research methodology is the search for knowledge through objectives and systematic method of finding solution to a problem of research. The purpose of research is to discover answer to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered as yet.

The main objective of the present investigation was to assess the problems of shift work faced by female nurses and its impact. This chapter has been organized in the following sequence

- Locale of the study
- Sample selection
- Research tool
- Data collection
- Analysis of data.

Locale of the study:

The present study was conducted in Maharana Bhopal Government Hospital at Udaipur. The hospital was selected with the view that there was common rotation schedule, common administration and a homogenous group. This point was taken under consideration as literature shows that shift work is directly affected by the type of rotation and the administration.

Sample and its selection:

The sample consisted of 60 female nurses between the age group of 30 -60 years, working in flexible rotating shifts. These were further categorized into two groups, 30 nurses in age range of 30- 45 and 30 nurses in 45- 60 years of age. A list of the enrolled nurses was procured from the hospital and then a separate list of nurses within the age group of 30- 45 and 45 – 60 years was prepared and from each list a sample of 30 nurses was randomly selected by using systematic random sampling technique.

To each selected female nurse, the purpose of the research study was explained and its importance and requested for their cooperation. Among randomly selected samples, 5 per cent dropout was there, so 3 other names were then selected for the study.

Research tool :

A standardized tool was used for the present study. The standard shift work index (SSI) was used to elicit required data from each respondent. The questionnaire consisted of the related parameters to get an insight into the problems related to shift work of female nurses.

Situation in India and U.K. regarding working in shifts are different so a pilot study was conducted to see if this SSI would be effective to illustrate the problems of shift work and its impact on female nurses.

The first step was to translate the SSI into Hindi which was done with the help of an expert. This translated questionnaire was put to test on 10 female nurses – 5 each from 30- 45 years and 45-60 years. After tabulation of the data, it was found that many questions related to alcohol, smoking etc. were not answered positive by any of the respondents likewise a few questions in background information were not related to Indian conditions.

Thus, for the final data collection these were deleted from the questionnaire.

Health and well being :

Questions associated with health, diet, and medications were of concern in this section (questions- 1 to 6).

Data collection :

The data collection was done by using personal interview technique. It took the investigator around 10 – 15 min. to fill one questionnaire as minute details of shift were into consideration in the Standard Shift work Index.

Analysis of data:

For analysis of data, the Standard Shift work Index manual was used. Each section of questionnaire had its own tabulation style and scoring.

Physical health questionnaire:

Two general screening questions are included concerning diseases suffered and medicine consumption since starting shift work. Subjects are asked to indicate on a yes/no response option whether or not they have experienced any of the listed diseases (21 in total), or regularly taken any of the listed medications (16 in total) since beginning shift work.

Scoring:

The two subscales, digestive and cardio-vascular problems are scored separately.

A Likert type scale is used with response options ranging from 1 to 4, from “almost never” to “almost always” or “definitely not” to “definitely”. A total score is then computed for each scale by summing the individual scores. A higher score on each scale is associated with poorer physical health.

Cognitive-somatic anxiety questionnaire:

This measure has been used in treatment studies, including a comparison of meditation and cue-controlled relaxation.

Two subscales: Cognitive anxiety: Items c, e, g, i, k, m, n

Somatic anxiety: Items a, b, d, f, h, j, l

For total scores, items were added per subscale, the higher the score the higher the cognitive or somatic anxiety.

OBSERVATIONS AND ANALYSIS

The findings of the present study have been presented in the following sub-heads:

Problems related to health and well being of female nurses:

Shift work can have a negative impact on health and well being of workers as it causes-

– Disturbances of the normal circadian rhythms of the psychological functions, beginning with the sleep/ wake cycle.

– Interferences with work performance and efficiency over the 24 hour span, with consequent errors and accidents.

– Difficulties in maintaining the usual relationship both at family and social level, with consequent negative influences on marital relationships, care of children and social contacts.

– Deterioration of health that can be manifested in disturbances of sleeping and eating habits and, in the long run, in more severe disorder that deal prevalently with the gastrointestinal (colitis, gastroduodenitis and peptic ulcer), neuropsychic (chronic fatigue, anxiety, depression) and, probably, cardiovascular (hypertension, ischemic heart diseases) function. There is extensive research which describes the negative effects of shift work on health and wellbeing. Shift work may therefore be a common, but largely overlooked determinant of health and wellbeing

for many workers. The problem and its impact of shift on health and well being of the female nurses were studied.

Two aspects have been studied in Table 1 viz., a to h are digestive impacts, i to q assessed the cardiovascular impacts. The likert type scale was used with the option ranging from 1-4 *i.e.* almost never to almost always. A higher score was associated with higher health and well being problems.

Gastrointestinal and digestive problems such as indigestion, heartburn, stomachache and loss of appetite are more common among rotating shift workers and night workers than among day workers. Given the irregularity in type and timing of meals, it is not surprising that the night workers are more likely to have a poorer diet. At night, the loss of appetite often leads to increased snacking on “junk” food rather than eating a full, well- balanced meal. Feeling of fatigue may encourage the consumption

Table 1 : Mean score of respondents on frequency of facing problems related to health and well being of the respondents

Sr. No.	Digestive problems Category	Young group				Total	Old group				Total
		Almost never	Quite seldom	Quite often	Almost always		Almost never	Quite seldom	Quite often	Almost always	
1.	Disturbed appetite	15	12	27	0	54	30	0	0	0	30
2.	Watch on eating to avoid stomach upset	0	0	45	60	105	0	0	54	48	102
3.	Feeling of nauseous	25	0	15	0	40	30	0	0	0	30
4.	Suffer from heartburn or stomach-ache	21	10	12	0	43	11	0	57	0	68
5.	Complain of digestion difficulties	18	10	21	0	49	30	0	0	0	30
6.	Suffer from bloated stomach or flatulence	18	10	21	0	49	13	12	33	0	58
7.	Suffer from pain in your abdomen	19	10	18	0	47	30	0	0	0	30
8.	Suffer from constipation or diarrhea?	18	14	15	0	47	8	28	24	0	60
Cardiovascular problems											
9.	Suffer from heart palpitations	25	10	0	0	35	8	28	24	0	60
10.	Suffer from aches and pains in your chest	0	0	48	56	104	30	0	0	0	30
11.	Suffer from dizziness	17	22	6	0	45	30	0	0	0	30
12.	Suffer from sudden rushes of blood to your head	30	0	0	0	30	30	0	0	0	30
13.	Shortness of breath when climbing the stairs normally	5	8	18	10	31	0	0	0	30	30
14.	Have high blood pressure	5	2	12	11	30	0	22	38	0	60
15.	Heart beating irregularly	5	14	33	28	80	30	0	0	0	30
16.	Suffer from swollen feet?	4	8	27	52	91	21	18	0	0	39
17.	Feel "tight" in chest	30	0	0	0	30	30	0	0	0	30
18.	Put on too much weight	3	8	69	0	80	30	0	0	0	30
19.	Lost too much weight since beginning shift work?	30	0	0	0	30	30	0	0	0	30

of beverages with caffeine (coffee, cola) to help the worker stay awake.

As is evident from Table 1 the digestive problem was regarding a watch on appetite to avoid stomach scored highest *i.e.* 105 and 102 for young and old group quite often or always, respectively. Young group respondents also had distributed appetite, (54) while old group complained of heartburn or stomach burn quite often.

Life- style can directly affect an individual's health. Therefore, it is very important that a shift worker follows exercise programmes to maintain an adequate level of fitness. It is also very important not to smoke, to have good dietary habits and to participate in leisure activities.

A study of Swedish men with a history of heart attack showed they were significantly more likely to have been shift workers than those men without a history of heart attack. Another study showed that the modification of shifts rotation schedules by changing the direction of rotation of shifts to a forward direction (for example, days > afternoon > nights) can significantly decrease the level of several coronary risk factors, e.g., triglycerides, glucose and urinary excretion of catecholamine (chemicals like adrenalin that

occur naturally in the body).

Coming to the cardiovascular problems of the respondents, it was found that young group had more impact of shift work on their higher blood pressure and chest pain (104), swollen feet (91) put on weight (80) while high blood pressure was the only parameter in which old group faced problem due to shift *i.e.* with a score of 60.

Thus, the digestive and cardiovascular impact of shift were more prominent among the young group. This may be due to irregular eating patterns. The afternoon workers had their lunch in middle of the day instead of middle of shift work and this causes the digestive disturbances. Majority of the respondents of the study worked in shift with nights and so this could be one of the reasons for digestive problems faced by them.

Studies have shown (Table 2) that the combination of 12- hour shifts and 40 or more hours of work a week are associated with risk for neck, shoulder and back disorder. The same was reported by 20 per cent young respondents after starting shift work. It was 40 per cent before starting shift work and 60 per cent since starting shift work while 100 per cent of the old groups complaint

Table 2 : Per cent distribution of respondents on the basis of diagnosis of problems by doctor

Sr. No.	Category	Young group			Old group		
		Before starting shift work	Since starting shift work	Never	Before starting shift work	Since starting shift work	Never
1.	Chronic back pain	12(40%)	18(60%)	0	0	30 (100%)	0
2.	Gastritis, duodenitis	1(3.3%)	5(16.6%)	24(80%)	0	0	30(100%)
3.	Gastric or duodenal ulcer	0	0	30(100%)	0	0	30(100%)
4.	Gall stones	0	0	30(100%)	0	0	30(100%)
5.	Colitis	0	2(6.6%)	28(93%)	0	0	30(100%)
6.	Sinusitis, tonsillitis	0	0	30(100%)	0	0	30(100%)
7.	Bronchial asthma	0	0	30(100%)	0	0	30(100%)
8.	Angina	0	0	30(100%)	0	0	30(100%)
9.	Severe heart attack (myocardial infarction)	0	0	30(100%)	2(6.6%)	15(50%)	13(43%)
10.	High blood pressure	0	0	30(100%)	3(10%)	7(23%)	20(66.6%)
11.	Cardiac arrhythmias	0	0	30(100%)	0	0	30(100%)
12.	Hypercholesterolemia	0	0	30(100%)	0	0	30(100%)
13.	Diabetes	0	0	30(100%)	0	4(13%)	30(100%)
14.	Cystitis	0	0	30(100%)	0	0	30(100%)
15.	Kidney stones	0	0	30(100%)	0	0	30(100%)
16.	Eczema	0	0	30(100%)	0	0	30(100%)
17.	Chronic anxiety	0	0	30(100%)	5(16.6%)	4(13%)	21(70%)
18.	Depression	0	0	30(100%)	0	0	30(100%)
19.	Arthritis	0	0	30(100%)	0	0	30(100%)
20.	Hemorrhoids	0	0	30(100%)	0	0	30(100%)
21.	Varicose veins	0	0	30(100%)	0	0	30(100%)
22.	Anaemia	8(26.6%)	0	22(73%)	10(33%)	0	20(66.6%)
23.	Headaches	8(26.6%)	22(73%)	0	6(20%)	24(80%)	0
24.	Others	0	0	30(100%)	0	0	0

of chronic back pain since starting shift work. Headaches were complaints (73%) and severe heart attack problem was faced by 50 per cent among the old group respondents.

Thus, we can state that shift work does have severe impact on health and well being of the respondents. Effective working postures, diet, and strategies at organizational and personal levels can to some extent lower these health effect of shift- workers.

There is a well documented circadian (24 hours) rhythm that governs many of the major biological functions of the human body. Disturbance of these cycles in respondents for several of the most upsetting physical and emotional problems evening and night workers experience. Diurnal rhythms control pulse, blood pressure and cardio-pulmonary systems, blood composition, endocrine secretions, appetite and the wake up cycle. Shift work necessarily, interrupts these processes and requires that they occur at times for which the body is not genetically programmed or environmentally conditioned due to the problems related to sleep, appetite and digestion were the most common and persistent complaints from the respondents.

The impact of shift work on health and well being were studied on the medication taken by them and the anxiety- somatic and cognitive faced by them due to shift work.

It is clearly illustrated from Table 3 that medication for prolonged period was started or increased in young group respondents for diuretics, vasodilators, bronchodilators, steroids by 100 per cent respondents while 50 per cent took sleeping tablets, about 65 per cent took

antacids after starting shift work. The problems of appetite, irregular eating habit have been mentioned earlier which could be the reason for the same. The old group respondents took prolonged medicines for high blood pressure (73%) and heart attack (50%).

The impact of shift work on health are very challenging, if not looked into at earlier stage could have long time effects on health and well being of the respondents.

A nervous disorder characterized by a state of excessive uneasiness and apprehension, typically with compulsive behaviour or panic attacks is anxiety. The somatic and cognitive anxiety were studied in this investigation (Table 4).

Somatic anxiety is anxiety provoked by bodily symptoms of tension such as butterflies in the stomach. It is commonly contrasted with cognitive anxiety which is that provoked by mental concerns or worry (Table 5).

Stress is probably one of the key elements in the relationships between shift work and disease. The definition of stress varies, but in general it can be anticipated as a particular relationship between the person as taxing and exceeding his or her resources and endangering his or her" well being". Stress occurs in when a person has difficulty dealing with life situation, problems and goals. Stress has physical, emotional and cognitive effects. Nursing involves activities and interpersonal relationships that are often stressful.

Thus the somatic and cognitive anxiety were also calculated for the respondents on five point likert scale "not at all, at all, some what, very much very much so"

Table 3 : Per cent distribution of respondents regarding impact of shift work on health and well being

Sr. No.	Category	Young group			Old group		
		Before starting shift work	Since starting shift work	Never	Before starting shift work	Since starting shift work	Never
1.	Tranquillizers	0	0	30(100%)	0	0	30(100%)
2.	Sleeping tablets	0	15 (50%)	15(50%)	0	0	30(100%)
3.	Anti- depressants	0	0	30(100%)	0	0	30(100%)
4.	Antacids	2(6.6%)	20(67%)	8(27%)	0	0	30(100%)
5.	Antispasmodics	0	0	30(100%)	0	0	30(100%)
6.	Laxatives	0	8(27%)	22(73%)	5(16%)	0	25(83%)
7.	Drugs to control high blood pressure	3(10%)	20(67%)	7(24%)	0	22(73%)	8 (27%)
8.	Diuretics	0	30(100%)	0	0	0	30(100%)
9.	Heart medicines	7(23%)	2(6.6%)	21(70%)	0	15(50%)	15(50%)
10.	Vasodilators	0	30(100%)	0	0	0	30(100%)
11.	Bronchodilators	0	30(100%)	0	0	0	30(100%)
12.	Vitamins, tonics	21(70%)	9(30%)	0)	3(10%)	2(6.6%)	25(83%)
13.	Steroids	0	30(100%)	0	0	0	30(100%)
14.	Anti-inflammatory medicines	0	0	30(100%)	2(6.6%)	0	28(93%)
15.	Hormones (except contraceptive pills)	0	5(16.6%)	25(83%)	0	0	30(100%)

higher the score higher the anxiety.

Table 4 depicts the somatic anxiety of the respondents. Overall scores gives a picture that the old group have higher somatic anxiety than the young. Higher score was for heart beating was faster (132) and lowest *i.e.* not at all for physically immobilized. These results may be due to the eating habits. For the young group perspiration was the highest scored parameters for somatic anxiety (111).

The study is supported by Goldenberg and Waddle that age of the respondent, number of years of full time teaching and tenure status were most often significant factors (< 0.05) relating to the level of stress implications. One critical factor is the range of coping skills the persons already possesses and can use to adapt to the crisis. The ability to adapt is decreased in the very young, the very old, and those with altered physical or mental health, who do not have necessary physiological reserve to cope with

physical changes.

The cognitive anxiety was also found to be high in old age group respondents in comparison to young age. The old group respondents had highest score for loosing out on things (130) and a score of 80 on this factor was very much affecting them (Table 5).

While highest score for young group was for worrying on 'something that doesn't really matter' (117), only 'some what' score -9 for anxiety was for provoking picture out of their mind again old group showed higher cognitive anxiety. Studies have shown that age has impact on shifts and anxiety and was also seen among the respondents of the present study.

It is generally agreed that some features of shift system can influence the extent of well being and health problems experienced by the workers (Table 6). The overall health and well being problems was very high in young group as compared to the old group with a total

Table 4 : Mean score of impact of shift work on somatic anxiety of the respondents

Sr. No.	Category	Young group					Total	Old group					Total
		Not at all	At all	Some what	Very much	Very much so		Not at all	At all	Some what	Very much	Very much so	
1.	Perspire	0	0	39	52	20	111	0	0	42	40	30	112
2.	Heart beats faster	0	12	36	40	10	98	0	0	6	56	70	132
3.	Feel jittery in my body	0	0	66	32	0	98	0	0	30	60	25	115
4.	Get diarrhea	0	0	66	32	0	98	0	0	30	60	25	115
5.	Feel tense in stomach	0	0	66	32	0	98	30	0	0	0	0	30
6.	Nervously pace	0	54	9	0	0	63	19	0	27	8	0	54
7.	Feel physically immobilized	0	54	9	0	0	63	30	0	0	0	0	30

Table 5 : Mean score of impact of shift work on cognitive anxiety of the respondents

Sr. No.	Category	Young group					Total	Old group					Total
		Not at all	At all	Some what	Very much	Very much so		Not at all	At all	Some what	Very much	Very much so	
1.	Worry too much over something that doesn't really matter	0	4	21	52	40	117	0	0	6	80	40	126
2.	Imagine terrifying scenes	0	0	90	0	0	90	0	0	30	60	25	115
3.	Can't keep anxiety provoking pictures out of mind	0	54	9	0	0	63	30	0	0	0	0	30
4.	Some unimportant though runs through mind and bothers	0	12	36	32	15	95	30	0	0	0	0	30
5.	Feel like losing out on things because can't make up mind soon enough	0	12	36	40	10	98	0	0	18	32	80	130
6.	Can't keep anxiety provoking thoughts out of mind	0	0	66	32	0	98	0	0	24	28	75	127
7.	Find it difficult to concentrate because of uncontrollable thoughts	0	28	48	0	0	76	22	16	0	0	0	38

score of 1079 and 807, respectively.

Thus the impact of shift work was also higher in the young group than the old group respondents. The interpersonal conflicts and anxiety are also common problems of shift workers. Feeling of isolation, loneliness were also some of the effects of anxiety due to the shift work of female nurses in young age group. Thus, we can

Table 6 : Overall score for problems and impact of shift work on health and well being of the respondents

Sr. No.	Category	Young group	Old group
Problems			
1.	Frequency of expercing health problems	1079	807
2.	Suffering from disease (diagnose by doctor)	47	84
Impact			
3.	Medications for prolonged periods	199	39
4.	Somatic anxiety	629	588
5.	Cognitive anxiety	637	596

say that age was affecting factor that the health and well being of the selected respondents of the study.

LITERATURE CITED

Alward, Ruth, R. (2008). Night shift work related problems in young female nurses in Japan. *J. Occupational Health*, **43**:156-161.

Anders, K. (2003). The effects of changing from weekly rotating to a rapidly rotating shift schedule. *Shiftwork: Health, Sleep & Performance*, **37**: 995–1007.

Coffey, Nachreiner, F. and Lu'beck-Ploger, H. (1998). A process model of shift work and health. *J. Occupational Health Psychol.*, **4**: 207–218.

Davis, Mirick and Stevens (2001). Rotating night shifts and risk of breast cancer in women participating in the nurse's health study. *J. National Cancer Institute*, **20**: 1563–1568.

Hughes and Stone (2004). Health effects of shift work and extended hours of work. *Occupational & Environ. Medicine*, **58**: 68- 72.

McVicar (2003). A study of the social support and job stress among nursing staff. *VGH Nursing*, **23** : 40- 45.

Muecke (2005). A study of the social support and job stress among nursing staff. *VGH Nursing*, **24** :59-68

Poissonnet and Ve'ron (2000). A study of the social support and job stress among nursing staff. *VGH Nursing*, **20**:60-66.

Taylor, D.L., Colligan, M.J., Skjei, E.W. and Polly, S.J. (1997). Health consequences of Shiftwork. *National Institute for Occupational Safety & Health*, **14** : 56- 60.

